



# PARKER MEDICAL, INC.

High Voltage X-Ray Imaging Components

## Extended Federal Standard High Voltage Cables and Receptacles

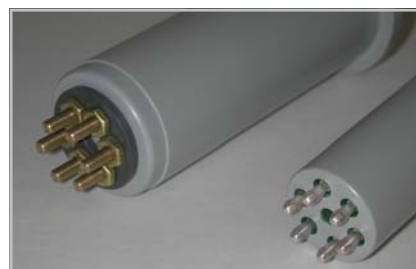
Medical  
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Connectors  
X-Ray Tube Cooling  
X-Ray Beam Control  
Measurement Devices  
X-Ray Source Design

The federal standard terminal and receptacle have been used as a high voltage connection system for over thirty years. It has been used so successfully for a wide variety of applications that the basic design has been accepted as an international standard. The typical federal standard 3-pin and 4-pin configurations are rated for 75KV. When assembled with a 100KV cable and PMI proprietary materials and processing techniques, the cable can be rated for 100KV operation. PMI has now extended this proven design to meet even higher KV operating voltages—160KV and 250KV. They are typically used in end-grounded systems, dual-pole equipment operating at over 250KV and test equipment

Typical cable configurations include the extended federal plug on both ends or other high KV HV terminations like the R24, R28 or other conical tapered types at the other end. The six-conductor configuration serves to power multiple focal spots and provide bias and pulse control. The following table describes the KV rating and pin configurations of the extended federal standard. For further electrical and mechanical details reference PMI drawings H453/H454 and H1449 Specification for Type Q high voltage cable.



High-KV federal standard cables and receptacles. From front to back: 100KV, 160KV and 250KV.



Close-up, PMI six-conductor H453 P6-100/H454 P6-100 receptacle.

### H453/H454 HV Cable/Receptacle Specification

PART NUMBER	PIN CONFIGURATION	KVDC RATING	CABLE TYPE	MATING RECEPTACLE
H453-P1	-100 1-CONDUCTOR CENTER PIN	100KV	M	H454-P1-100
	-160	160KV	Q1, E	H454-P1-160
	-250	250KV	E, F	H454-P1-250
H453-P3	-100 3-CONDUCTOR FED STD	100KV	M	H454-P3-100
	-160	160KV	Q1, E	H454-P3-160
	-250	250KV	E, F	H454-P3-250
H453-P4S	-100 4-CONDUCTOR SYMMETRICAL	100KV	G, H, N	H454-P4S-100
	-160	160KV	Q1, E	H454-P4S-160
	-250	250KV	E, F	H454-P4S-250
H453-P4G	-100 4-CONDUCTOR GRID	100KV	G	H454-P4G-100
	-160	160KV	Q1, E	H454-P4G-160
	-250	250KV	E, F	H454-P4G-250
H453-P5	-100 5-CONDUCTOR GRID WITH CENTER PIN	100KV	Q2	H454-P5-100
	-160	160KV	Q2	H454-P5-160
	-250	250KV	—	H454-P5-250
H453-P6	-100 6-CONDUCTOR CIRCULAR	100KV	Q2	H454-P6-100
	-160	160KV	Q2	H454-P6-160
	-250	250KV	—	H454-P6-250